

Claims

1. A hydraulic transformer, comprising a multiplicity of
5 displacers guided in a displacer volume, and
 commutation means (4) for shifting pressure medium
 supply and discharge to and from the displacers,
 wherein said commutation means (4) include at least
10 two control recesses (18, 20, 22) connected with a
 pressure port, consumer port, or tank port (B, A, T),
 the relative positions of which are variable in
 relation to the dead-center positions of said
 displacers, characterized by a dead space (40, 42,
15 44) through the intermediary of which the displacer
 volume is increased in a commutation phase.
2. The hydraulic transformer in accordance with claim 1,
 wherein said control means (4) include three control
 recesses (18, 20, 22) distributed on the periphery,
20 and said dead spaces (40, 42, 44) open into
 respective ranges between said control recesses (18,
 20, 22).
3. The hydraulic transformer in accordance with claim 2,
25 wherein said control recesses are control kidneys
 (18, 20, 22), and said dead spaces (40, 42, 44) open
 into respective kidney separation web (25) between
 two adjacent control kidneys (18, 20, 22).
- 30 4. The hydraulic transformer in accordance with claim 2
 or 3, wherein said control means (4) include a
 control disc (16) in which said control kidneys (18,
 20, 22) and through bores (23, 27, 29) of said dead
 spaces (40, 42, 44) are formed.

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5. The hydraulic transformer in accordance with claim 4,
wherein a part of said dead spaces (40, 42, 44) next
to said through bores (23, 27, 29) is formed in a
base body (24) of said commutation means (4), in
5 which base body connection passages (26, 28, 30)
leading to said ports (A, B, T) are provided at least
in portions.
6. The hydraulic transformer in accordance with any one
10 of the preceding claims, wherein the volume of each
dead space (40, 42, 44) is larger than or equal to
the displacement volume of a displacer.
7. The hydraulic transformer in accordance with claim 6,
15 wherein the volume of said dead space (40, 42, 44) is
less than five times the displacement volume.
8. The hydraulic transformer in accordance with any one
of claims 2 to 7, wherein one of said dead spaces
20 (44) is formed to be substantially axial, and said
two other dead spaces (40, 42) are formed to be
substantially offset with respect to the axis (34) of
said control member (12).
- 25 8. The hydraulic transformer in accordance with any one
of the preceding claims, wherein said displacers are
pistons of an axial piston bent-axis unit.